



BLACKSTONE-MILLVILLE REGIONAL DISTRICT SCHOOL COMMITTEE

Frederick W. Hartnett Middle School
Thursday, May 12, 2016
6:30 PM

Included in this transmission is the following:

- I. **Opening of Meeting**
 - a. Call to Order
 - b. Pledge of Allegiance
 - c. Introduction of Members
- II. **Public Forum**
- III. **Report of Student Representative**
 - a. Eric Eisner
 - b. Griffin Reilly
 - c. Welcome to our new Student Reps, Brittany Dwyer and Jack Keefe
- IV. **Consent Agenda A**
 - a. Warrants
 - b. Field Trip Request
 - c. Minutes of Meeting
 - a. April 28, 2016
- V. **School Committee**
- VI. **Report of the Superintendent**
 - a. Robert Ferrari from NWSI – Update on Millville Elementary Water Solutions
 - b. Vote to Approve the 2016-2017 Draft School Calendar
 - c. Vote to Approve 2016-2017 School Choice
 - d. Tentative School Committee Meeting Dates for 2016-2017
 - e. Health Insurance Update
 - f. FY17 Budget Update
 - g. Congratulations to Mr. Justin Cameron, Middle School Principal of the Year
 - h. Middle School Marquee Sign

VII. Report of the Assistant Superintendent

- a. STARS Pilot
- b. Middle School Math Pilot

VIII. Public Forum

IX. School Committee Forum

- a. Mrs. Erin P. Vinacco, Chair
- b. Mrs. Wendy L. Greenstein, Vice Chair
- c. Ms. Tara Larkin, District Secretary
- d. Mrs. Jane Reggio, District Treasurer
- e. Mr. William F. Chaplin, Jr., Member
- f. Mr. Steven J. Tringali, Member
- g. Ms. Jo-Anne Watson, Member
- h. Ms. Georgette A. Jarret, Member

X. Upcoming Meetings

- a. May 19, 2016 – Budget Workshop
- b. May 26, 2016 – Public Meeting

XI. Executive Session

XII. Adjournment

The items listed on this agenda are those reasonably anticipated by the Chair to be discussed at the meeting. Not all items may in fact be discussed and other items not listed may also be brought up for discussion to the extent permitted by law.

**BLACKSTONE-MILLVILLE
REGIONAL SCHOOL DISTRICT
ALLEN W. HIMMELBERGER
SUPERINTENDENT OF SCHOOLS**

MEMO

TO: Blackstone-Millville Regional School Committee
RE: School Committee, Consent Agenda A
DATE: May 12, 2016

Recommended Consent Agenda A – Items

1. Warrants

- a. Payroll
 - i. Move to approve payroll voucher numbers: 28 and 1031 as submitted by the Superintendent of Schools
- b. Payables
 - i. Move to approve the payable voucher numbers: General 1865, 1867 and Cafeteria 1866 as submitted by the Superintendent of Schools

2. Field Trips

- a. Southwick Zoo, Mendon, MA – requested by Mrs. Cote 1st Grade at JFK – Tuesday, June 14, 2016
- b. Jungle Book Movie - Cinema World, Lincoln, RI – requested by Mrs. Faulkner and Mrs. Streaman Grade 5 – Wednesday, May 25, 2016
 - i. Move to approve field trip to Southwick Zoo, as recommended by the Superintendent of Schools
 - ii. Move to approve field trip to Jungle Book - Movie Cinema World, as recommended by the Superintendent of Schools

3. Minutes

- i. Move to approve the school committee minutes of
 - 1. April 28, 2016

Memo

To: Bob Bostwick, Margo Webber, Paula Caron, Kelly Momberger – MADEP

From: Robert F. Ferrari, PE

CC: Helen Coffin – Town of Millville; Allen Himmelberger – Superintendent of Schools

Millville Board of Selectmen

Date: May 11, 2016

Re: Millville Elementary School - Disinfection By-Products Monitoring Follow-Up

Over the past two (2) months NWSI implemented the corrective actions presented in the project memo dated May 5, 2016. Another round of analytical monitoring of the public water system serving MES was conducted on May 6, 2016 to assess the system performance and the effectiveness of the corrective action to reduce disinfection by-products in the water distribution system. This project memo presents a summary of the most recent monitoring results, with engineering review, analysis and comments.

The table below presents a summary of the water quality monitoring data for samples obtained on May 6, 2016 at five (5) locations across the public water system, including the source (raw) well water, greensand filter effluent (post iron/manganese removal), the water storage tank discharge into the distribution system, and the two (2) DBP monitoring locations within the school facility. Findings from a review of this data are summarized below.

	Raw Well Water	GS Filter #2 Effluent	Storage Tank Discharge	DBP-1 Nurses Sta.	DBP-2 Room 308
pH	6.68 su	6.41 su	6.63 su	7.49 su	7.51 su
Cl Residual	0.00	0.39 mg/l	0.17 mg/l	0.19 mg/l	0.14 mg/l
TOC	3.4 mg/l	2.3 mg/l	2.3 mg/l	2.3 mg/l	2.3 mg/l
Iron	7.96 mg/l	<0.100 mg/l	0.176 mg/l	0.206 mg/l	0.187 mg/l
Manganese	1.01 mg/l	<0.010 mg/l	0.013 mg/l	0.013 mg/l	0.013 mg/l
Haloacetic Acids	NA	23.0 ug/l	32.2 ug/l	34.3 mg/l	32.3 ug/l
TTHM	NA	8.2 ug/l	31.5 ug/l	33.8 ug/l	34.7 ug/l

- **pH:** The pH of the raw water 6.68 su is consistent with expectations based upon historical monitoring of the raw well water. This pH is within the optimum range for operation of the greensand filter. The pH remains consistent through the greensand filter (6.41 su) and the water storage tank (6.63 su) and then increases to approximately 7.5 su in the distribution system, following the pH adjustment for corrosion control. The distribution water pH is within the target range for optimum corrosion control.

- **Chlorine Residual**: The chlorine residual in the filter effluent is 0.39 mg/l, consistent with the operating specification for the filter system. As expected, the chlorine residual declines within the water storage tank (approx.. 2.5 days average hydraulic retention time) to 0.17 mg/l, and is then consistent through the distribution system, demonstrating 0.19 and 0.14 mg/l at the two (2) DBP monitoring locations. This level is also consistent with the chlorine residual monitor data log that demonstrated an average filter effluent chlorine residual of 0.228 mg/l in the 64 hour period prior to the DBP monitoring, with a range of 0.02 to 0.42 mg/l.
- **Total Organic Carbon (TOC)**: TOC analysis is conducted to provide an indication of naturally present fulvic and humic acids, amino acids, and other natural organic matter, in the water supply, that can react with chlorine to form disinfection by-products. A TOC “profile” across the water treatment and distribution system determined the raw well water contained a moderately low level of TOC, 3.4 mg/l. A slight reduction of TOC occurred through the greensand filters, believed due to oxidation within the filter bed, resulting in a concentration of 2.3 mg/l. This TOC concentration was sustained across the storage and distribution system, indicating no further oxidative reaction of TOC occurred, which is consistent with the sustained, moderate DBP concentration through the system.
- **Iron**: The raw well water demonstrates total iron at 7.96 mg/l, consistent with long-term monitoring. The greensand filter effluent demonstrates non-detectable iron (<0.100 mg/l) indicating excellent performance for iron oxidation and removal. The storage tank discharge and distribution system monitoring locations demonstrate similar, low levels of iron, 0.176 to 0.206 mg/l, indicating that the storage tank likely contains limited quantities of particulate iron. The iron concentration is below the MCL for this secondary contaminant. Maintenance flushing of the tank during the summer should remove the iron.
- **Manganese**: The raw well water demonstrates total manganese at 1.01 mg/l, consistent with long-term monitoring. The greensand filter effluent demonstrates non-detectable manganese (<0.010 mg/l) indicating excellent performance for manganese oxidation and removal. The storage tank discharge and distribution system monitoring locations demonstrate similar, low levels of manganese of 0.013 mg/l, indicating that the storage tank likely contains limited quantities of particulate manganese. The manganese concentration is below the MCL for this secondary contaminant. Maintenance flushing of the tank during the summer should remove the iron.
- **Disinfection By-Products (DBP)**: As expected, DBP are initially generated in the greensand filters due to chlorine reactions with materials in the water. The DBP levels increased in the water storage tank, as expected, due to the approximate 2.5 hydraulic retention time, attaining concentrations of 32.2 ug/l (HAA’s) and 31.5 ug/l (TTHM’s). The monitoring at the two (2) distribution system locations determined only slight increases in the concentrations of HAA’s (32.3 & 34.3 ug/l) and TTHM’s (33.8 & 34.7 ug/l) which is consistent with the finding that there was no further degradation of TOC, in the storage tank and distribution system. The resultant DBP concentrations are substantially below the respective MCL’s.

The table below presents an updated summary of the 2015/16 DBP monitoring data, including the distribution system HRT, average chlorine residual and chlorine mass in the system. The data clearly demonstrate that the reduction in HRT and chlorine residual have resulted in a significantly reduced DBP generation in the water storage tank and distribution system.

Disinfection By-Products Monitoring – Millville Elementary School

Sample Location	DBP-1 Nurses Station		DBP-2 Room 308		Maximum Distribution HRT	Avg. Cl Residual (mg/l)	Residual Cl Mass (lbs)
	HAA	TTHM	HAA	TTHM			
05/06/16	34.3 ug/l	33.8 ug/l	32.3 ug/l	34.7 ug/l	2.5 days	0.228 mg/l	0.009 lbs
04/15/16	45.3 ug/l	59.5 ug/l	46.5 ug/l	58.0 ug/l	4 days	0.423 mg/l	0.026 lbs.
03/30/16	65.5 ug/l	65.6 ug/l	64.0 ug/l	63.7 ug/l	6 days	0.320 mg/l	0.018 lbs.
02/10/16	109.9 ug/l	91.0 ug/l	112.8 ug/l	89.0 ug/l	7 days	0.967 mg/l	0.053 lbs.
11/10/15	38.7 ug/l	40.9 ug/l	29.9 ug/l	43.1 ug/l	5 days	0.470 mg/l	0.034 lbs.
08/18/15	64.1 ug/l	41.1 ug/l	64.1 ug/l	41.4 ug/l	4 days	0.345 mg/l	0.009 lbs.
05/19/15	57.9 ug/l	71.7 ug/l	57.4 ug/l	72.9 ug/l	6 days	0.557 mg/l	0.033 lbs.
02/25/15	22.9 ug/l	18.9 ug/l	24.1 ug/l	17.8 ug/l	4 days	0.144 mg/l	0.009 lbs.

Summary Conclusions:

The following findings and conclusions were determined from this evaluation:

- The greensand filtration system has continued to operate effectively, with the greensand filter effluent typically demonstrating non-detectable iron and manganese;
- The chlorine residual analyzer data log indicates that the chlorine residual is consistently <0.5 mg/l, within the desired operating specification. In the period prior to the most recent DBP monitoring event, the average chlorine residual was 0.228 mg/l.
- NWSI modified the water storage tank water level control setpoint, reducing the average storage volume to approximately 5,000 gallons. This in turn reduced the average hydraulic retention time to approximately 2.5 days, prior to this monitoring event.
- The raw well water demonstrated a moderately low TOC content 3.4 mg/l, with only a minimal reduction occurring through the water treatment system. The TOC concentration was sustained through the storage tank and distribution system, indicating no further oxidative reaction with natural organic materials in the water.
- The disinfection by-products monitoring determined that effective control of both the filter effluent chlorine residual and the hydraulic retention time in the storage tank and distribution system will maintain DBP's at levels substantially below their maximum concentration limits (MCL's).

Recommendations:

NWSI recommends the following;

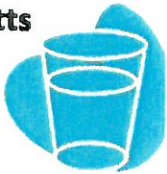
1. Maintain a filter effluent chlorine residual of <0.50 mg/l in the greensand filter effluent;
2. During the operating school year maintain the water storage tank level control setpoints to limit the maximum water volume to 5,000 gallons, to reduce the water inventory and resultant hydraulic retention time in the system. The intent is to maintain the HRT at ≤ 4 days, including weekends;
3. During the summer recess reduce the water storage tank level control setpoint to 1,500-1,000 to minimize HRT in the system. Implement the automatic flush blow-offs to assure periodic flushing of the distribution mains during extended periods of minimal water demand;
4. The water storage tank operating protocol will be modified to perform flushing of water following vacations and shut-downs that occur during the school year, to prevent water from remaining in the system during periods when the school is closed from 4 to 10 days;
5. Conduct another TOC/DBP monitoring event in June 2016 to enhance the monitoring data base and confirm the validation of the modifications to the system operation and control;
6. NWSI recommends that the DBPR sampling schedule be modified such that the sampling date in August be moved to mid-September. This will allow the monitoring to occur during the normal school operating schedule and be representative of the actual operations and water quality consumed by the staff and students. The present August sampling date occurs when there is nearly no water use, for an extended period of time, in the school. NWSI would continue to conduct a comprehensive system inspection and flushing program, to prepare the school for opening.

Please contact this office with any questions or comments.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER



To all consumers of the Millville Elementary School located in Millville, Massachusetts
Haloacetic Acids (HAA5) are Above Drinking Water Standards



This is an important notice - please translate it for anyone who does not understand English.

This notice is to advise our customers that our water system was temporarily in noncompliance with the drinking water standards for Haloacetic Acids (HAA5). Although this is *not an emergency*, as our customers, you have a right to know what happened, what you should do, and what we have done and are doing to correct this situation.

We are required to monitor the drinking water for HAA5 levels on a quarterly basis (once every three months). The results of last quarter's sampling which was conducted on February 10, 2016 and March 30, 2016 show that our system exceeded the standard or maximum contaminant level (MCL) for HAA5, which is 60 parts per billion (ppb). Compliance with the MCL is calculated based on a locational running annual average (LRAA) of samples collected during the last four quarters. The LRAA level of HAA5 calculated during the first quarter of 2016 was 63 ppb. This value exceeds the respective MCL for HAA5.

What does this mean?

This is not an immediate risk. If it had been, you would have been notified right away. However, pregnant women and women of childbearing age may be at increased risk and should seek advice from their health care providers if they have any concerns. ***Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.***

What happened? What is being done?

HAA5 are a byproduct of chlorine disinfection which forms when chlorine combines with natural organic matter commonly found in surface water supplies. HAA5 levels can vary depending on a number of factors including the amount of chlorine used, amount of organic plant material in water sources, temperature, and seasons. We must control HAA5 levels while also maintaining appropriate levels of chlorine in the water necessary to remove iron and manganese from the water. Upon determination that a problem existed, School personnel and the system Certified Operator, took immediate corrective action to reduce the amount of chlorine used in the system. Subsequent follow-up water quality monitoring on March 30, 2016 determined that the HAA5 were still slightly elevated (average 65 ppb) and additional control adjustments were made. Another follow-up monitoring event on April 15, 2016 determined that the HAA5 in the water had been reduced to 46 ppb. Our water system is continuing to work with MassDEP on evaluating long-term upgrades to the treatment plant and system and the reporting system.

- A question and answer document on health effects, precautions, and water treatment options for HAA5 has been provided by MassDEP and is available on our website <http://www.bmrtd.net/>.
- You can also contact the US EPA Safe Drinking Water Hot Line at 1-800-426-4791.

For more information please visit our website at <http://www.bmrtd.net/> or contact Allen Himmelberger, Superintendent of Schools, at 508-876-0177 or 175 Lincoln St., Blackstone, MA 01504.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.



MassDEP Fact Sheet

HAA5 in Drinking Water: Information for Consumers of Millville Elementary School Water System

What are HAA5?

Haloacetic acids (HAA) are a group of disinfection byproducts that form when chlorine compounds that are used to disinfect water, react with naturally-occurring organic and inorganic materials in the water. There are five significant HAAs potentially found in disinfected drinking water and their combined concentration is referred to as HAA5.

All water systems that use chlorine as part of the water treatment are required by federal and state law to sample for HAA5 on a regular basis (quarterly, or once every three months) in several locations in the distribution system.

Why is chlorine added?

Chlorine (sodium hypochlorite) is commonly used in treatment operations and to treat the water as it travels through the pipes in the distribution system to prevent growth of microorganisms, or contamination from an outside source. Millville Elementary School adds chlorine to its drinking water system to maintain effective treatment for the removal of naturally occurring iron and manganese from the water and to minimize the potential of microbial growth in the distribution system.

What is an MCL and how is compliance with the MCL determined?

Drinking water standards are set to protect against potential negative health effects from drinking water containing contaminants. The Maximum Contaminant Level (MCL) in drinking water is set so that the amount of the contaminant consumed does not exceed safe levels. Some MCLs regulate the daily amount of the contaminant consumed (for chemicals that pose an immediate risk), and some regulate the contaminant amount averaged over a long period of time (for chemicals that pose a long-term risk). The HAA5 MCL is set at a level to balance the immediate risk of bacterial contamination and the long-term risk of health effects potentially associated with exposures to HAA5 such as cancer. The USEPA and MassDEP have set an MCL for HAA5s of 60 parts per billion (ppb) or micrograms per liter (ug/L) as an annual average. Federal and state compliance with the MCL requires that the running annual average of four samples (i.e., quarterly, or once every three months over a year) not exceed the MCL at each sampling location.

How can students and staff be exposed to HAA5s in drinking water at school?

The main source of exposure to drinking water at the school is from ingestion (i.e., drinking the water and ingesting it in foods and/or ice prepared with the water). It is possible that small amounts of HAA5 chemicals could be absorbed through the skin during handwashing and (for staff who use the school shower) showering. Significant inhalation exposures during handwashing or showering of HAA5 chemicals does not occur as these chemicals do not readily vaporize into the air.

What are the health risks of concern associated with using water containing HAA5?

The MCL for HAA5 is based on potential cancer risks following a lifetime of drinking the water. HAA5 are considered to be possibly carcinogenic to humans by EPA because of evidence of carcinogenicity in experimental animals and limited evidence in people. Some of the individual chemicals that comprise HAA5 have also caused other effects in experimental laboratory animals following high levels of exposure, including toxicity to the liver, kidneys, neurological and reproductive systems. Various adverse reproductive and developmental effects have been observed in experimental animals following exposure to disinfection byproducts (which include HAA5). In some, but not all, studies in people, similar effects have also been reported.

Based on the available information, long term consumption of HAA5 in drinking water above the MCL may increase the risk of certain types of cancer and other adverse effects in some people. The degree of risk for these effects will depend on the HAA5 level and the duration of exposure. Consumption of water with HAA5 levels somewhat above the MCL for limited durations, for example, while corrective actions are being taken to lower the levels, is not likely to significantly increase risks of adverse health effects for most people. Because some data indicate that disinfection byproducts may increase the risk of developmental effects, women who are pregnant or may become pregnant may wish to avoid consuming water containing HAA5 and other disinfection byproducts exceeding the drinking water standard.

If you are concerned and would like to reduce your or your child's exposure to HAA5, what can you do?

The most significant measure that students and staff can take to reduce their exposure to HAA5 is to bring their own water to school, either bottled water or water from another approved source of drinking water. Students and staff could also choose to bring their own lunch and snacks from home or choose beverages and foods from the cafeteria that are not prepared using the school water supply, particularly foods that retain water such as oatmeal or pasta.

Who should you contact for more information?

For additional information, please contact Allen Himmelberger, Superintendent of the Blackstone-Millville Regional School District at (508) 876-0177.

Parents and staff, including pregnant women and women of child-bearing age who may be at increased risk, may wish to seek the advice of their health care provider if they have any additional concerns.

Memo

To: Bob Bostwick, Margo Webber, Paula Caron, Kelly Momberger – MADEP
From: Robert F. Ferrari, PE
cc: Helen Coffin – Town of Millville; Allen Himmelberger – Superintendent of Schools
Millville Board of Selectmen
Date: May 5, 2016
Re: Millville Elementary School - Disinfection By-Products Investigation

The Greensand Filtration system was originally installed in 2010 and validated for operation in 2011. Operational problems in 2012/13, principally due to inadequate pre-oxidation chemical feed dosage were corrected and the system has been operating successfully to remove iron and manganese from the raw well water since December, 2013. The filters were re-bedded and re-validated in March 2014 and the School eliminated the use of bottled water in September 2014.

The greensand filtration system utilizes sodium hypochlorite for pre-oxidation of iron and manganese, using a filter effluent chlorine residual of 0.5 mg/l. In August 2015 routine quarterly disinfection by-products (DBP) monitoring determined that Haloacetic Acids (HAA5) were slightly elevated, at 64.1 ug/l (MCL is 60.0 ug/l) in the distribution system, while Total Trihalomethanes (TTHM) were in compliance. A system inspection determined that the pre-chlorination system was operating correctly and the chlorine residual was within the operating specification. The slight exceedance of the HAA limit was an extended hydraulic retention time in the storage tank, due to the minimal daily water demand during the summer. The system returned to compliance at the next quarterly monitoring event.

A water quality monitoring event on February 10, 2016 (reported February 22, 2016) determined that both HAA5 and TTHM exceeded their respective discharge limits (MCL). NWSI responded by reducing the chlorine dosage (total of 3 reduction adjustments) and shortening the greensand filter operating cycle, over the following 5 week period. A follow-up monitoring event on March 30, 2016 determined that TTHM returned to compliance however the HAA5, while greatly reduced (65.5 & 64.0 ug/l), still slightly exceeded their water quality limit. The chlorine dosage was further reduced (April 12, 2016) despite the system experiencing the highest iron loading (31 mg/l) since implementation. Another follow-up monitoring event on April 15, 2016 demonstrated that both HAA5 and TTHM were below their respective MCL's. In consultation with MADEP, NWSI has executed a detailed investigation of the causal factors for disinfection by-products exceeding the water quality limits. The project memo presents a summary of this investigation, including corrective action recommendations.

and mass of chlorine residual in the water. A summary of this evaluation is presented in the table below.

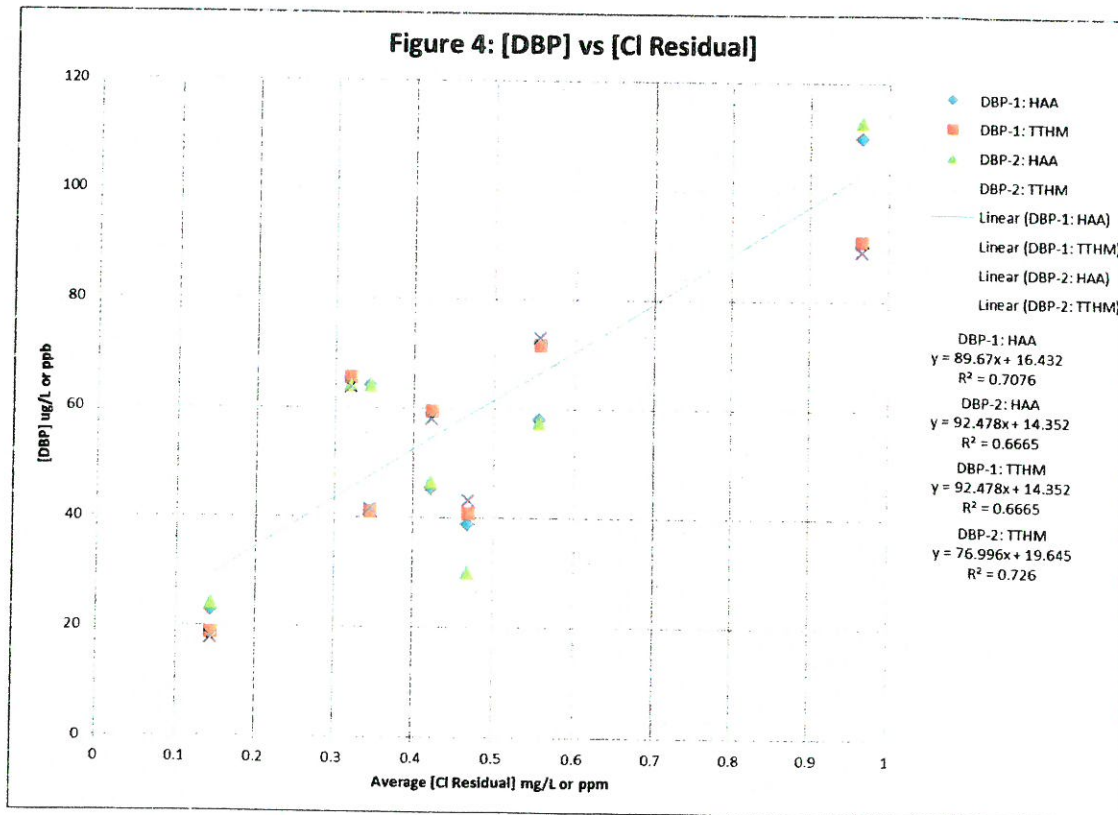
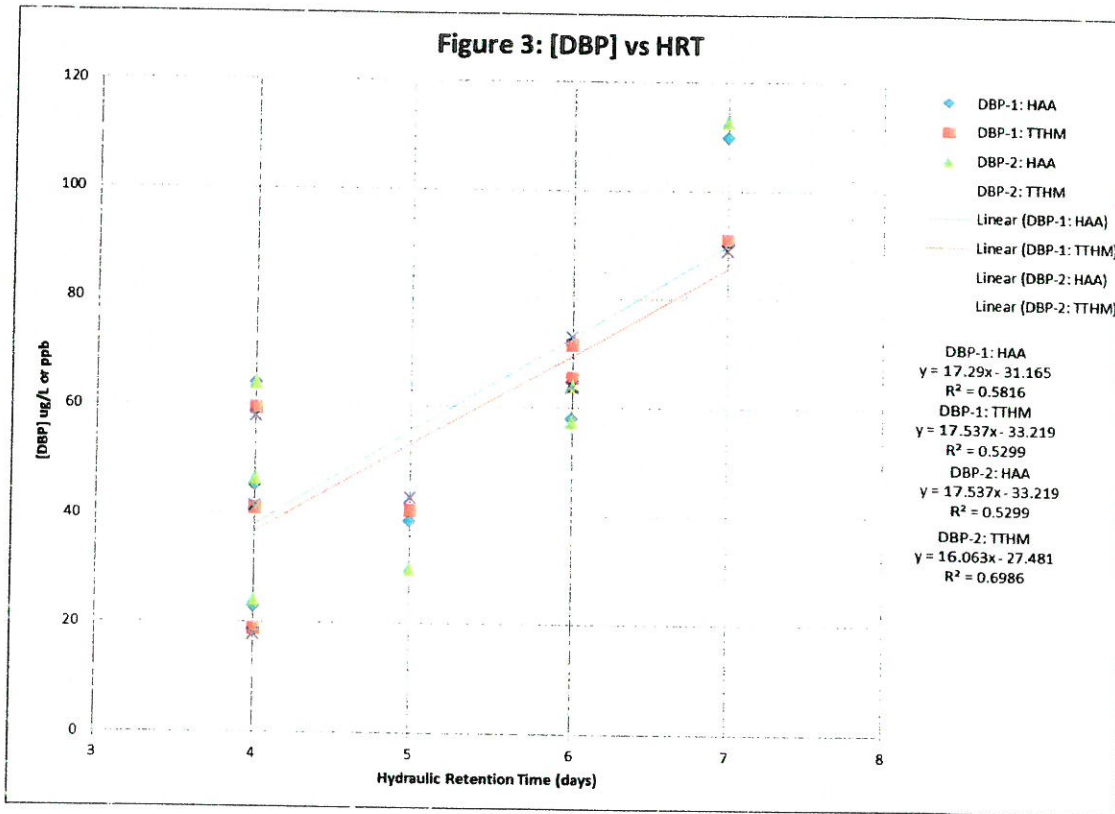
Disinfection By-Products Monitoring – Millville Elementary School

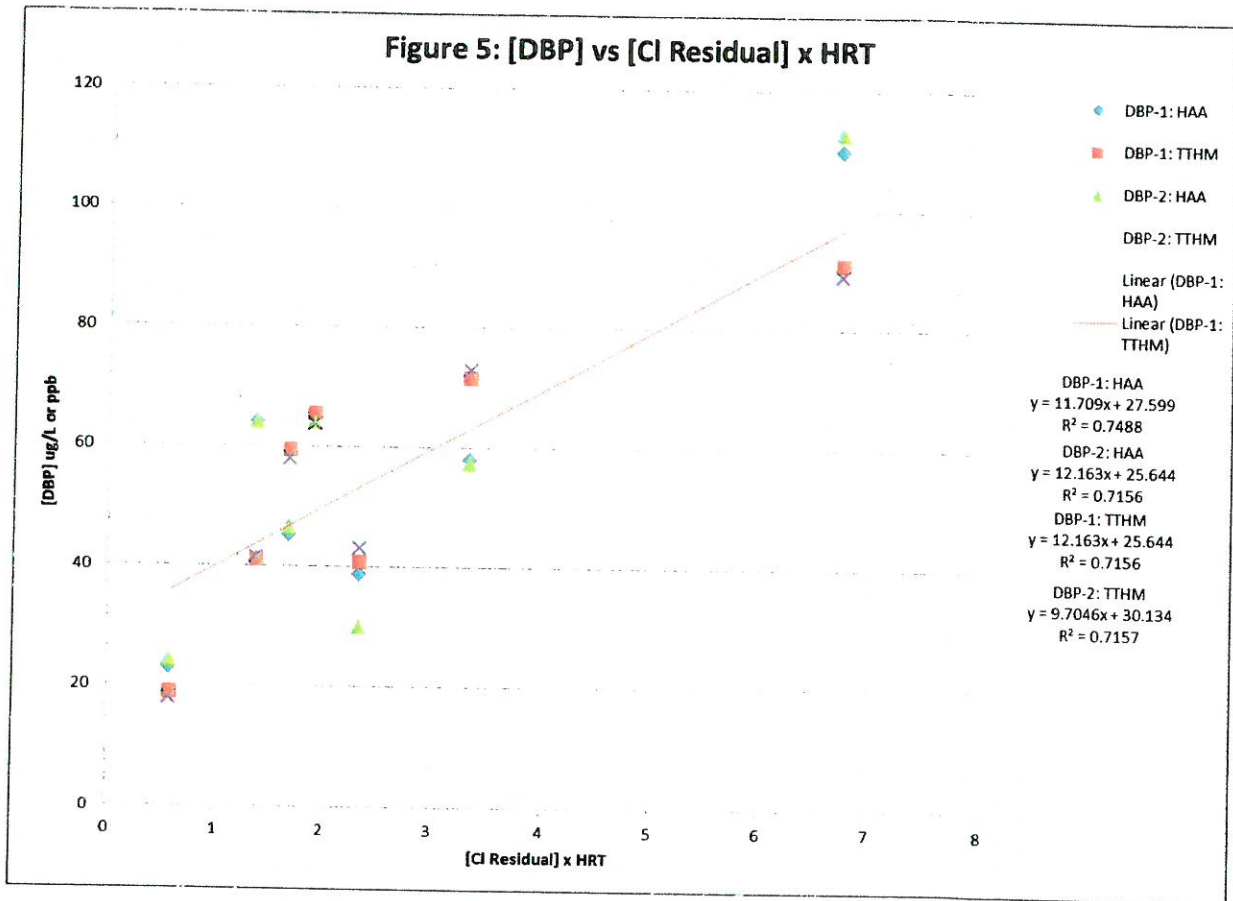
Sample Location	DBP-1 Nurses Station		DBP-2 Room 308		Maximum Distribution HRT	Avg. Cl Residual (mg/l)	Residual Cl Mass (lbs)
	HAA	TTHM	HAA	TTHM			
04/15/16	45.3 ug/l	59.5 ug/l	46.5 ug/l	58.0 ug/l	4 days	0.423 mg/l	0.026 lbs.
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02/10/16	109.9 ug/l	91.0 ug/l	112.8 ug/l	89.0 ug/l	7 days	0.967 mg/l	0.053 lbs.
11/10/15	38.7 ug/l	40.9 ug/l	29.9 ug/l	43.1 ug/l	5 days	0.470 mg/l	0.034 lbs.
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02/25/15	22.9 ug/l	18.9 ug/l	24.1 ug/l	17.8 ug/l	4 days	0.144 mg/l	0.009 lbs.

Maximum Distribution System Hydraulic Retention Time (HRT): Because hydraulic retention time in the distribution system is a significant factor impacting DBP generation, a determination was made of the facility water use in the days prior to the date of the DBP sampling. The treated water volume for each day is a function of the operating duration (minutes) of the well pump (and chlorine residual analyzer) and the well water flowrate (5 gpm). The water volume stored in the system is assumed to be 110% of the effective volume of the water storage tank to account for the volume of the water storage tank and distribution piping. The result of this analysis determined that the distribution system HRT ranged from 4 to 7 days, with the most significant exceedance of the water quality limits (02/10/16) occurring after 7 days HRT. Another exceedance of the HAA limits occurred on March 30, 2016, coincident with 6 days HRT.

It should be noted that the HAA exceedance on August 18, 2015 occurred during the summer when the school had very limited water demands and the tank control level was reduced to 2,500 gallons. This calculation determined that the system had a modest 4-day HRT at that time however it is quite possible that the monitoring locations had a greater HRT, due to the minimal school staffing and water demand. A regression analysis of the DBP concentration and the HRT (Figure #3) confirms a strong correlation between increasing HRT and DBP generation.

Average Chlorine Residual Concentration and Chlorine Mass in Distribution System: The average chlorine residual concentration of the water stored in the distribution system is determined from the chlorine residual data log. The nominal mass of chlorine in the distribution system is determined from the average concentration and the total water volume treated. The data clearly demonstrate that the most significant exceedance of the water quality limits (02/10/16) occurred at the time of the highest average chlorine residual (0.967 mg/l) and the greatest mass of chlorine in the distribution system (0.053 lbs.). A regression analysis of the DBP concentration and average chlorine residual (Figure #4) further confirms a strong correlation between increasing concentration and DBP generation. A somewhat weaker correlation exists between the total chlorine mass in the distribution system and DBP, believed to be due to the impact of HRT which significantly impacts DBP generation. A further evaluation of the DBP concentration and the product of the average chlorine residual and HRT is presented in Figure #5, also demonstrating a strong correlation.





Summary Conclusions:

The following findings and conclusions were determined from this evaluation:

- Since the re-validation of the greensand filtration system in 2014 the iron content in the raw water supply increased nearly 200%, with a peak influent iron concentration (31 mg/l) approximately 250% greater than previously experienced (12.2 mg/l);
- The greensand filtration system has continued to operate effectively, with the filter effluent typically demonstrating non-detectable iron and manganese;
- The chlorine residual analyzer has effectively monitored the chlorine concentration in the filter effluent discharged to the water storage tank. In late January and February 2016 the system experienced periodically excessive chlorine residual concentrations, exceeding 1.0 mg/l;
- The principal drivers of the elevated disinfection by-products are excessive chlorine residual in the water discharged to the water storage tank, in conjunction with hydraulic retention time exceeding 4-5 days. The highest DBP concentrations occurred when the HRT was 6-7 days;

- The greensand filtration system can provide effective removal of iron and manganese when maintaining a filter effluent chlorine residual of 0.2 to 0.5 mg/l;
- The most effective means to maintain a maximum 4-5 day HRT within the storage and distribution system is to reduce the volume of water maintained in the Water Storage Tank. Reducing the level control setpoint to 5,000 gallons during the operating school year and to 1,000 to 1,500 gallons during the summer will effectively reduce the HRT.
- Periodic monitoring of Total Organic Carbon in the water supply and treatment system would enhance an understanding of the relationship of organic material in the system to the generation of HAA's.

Corrective Action Plan:

NWSI has implemented the following corrective action items;

1. The chlorine dosage has been reduced to maintain a residual of <0.50 mg/l in the greensand filter effluent;
2. The chlorine residual analyzer control setpoints have been modified to provide an "alert" notification to the operator when the chlorine residual exceeds 0.5 mg/l for a sustained period of time (60 minutes) and an alarm notification if it exceeds 0.8 mg/l.
3. The water storage tank level control setpoints have been reduced from 7,000-8,000 gallons to 5,000-4,000 gallons, to reduce the water inventory and resultant hydraulic retention time in the system. The intent is to maintain the HRT at ≤ 4 days;
4. The water storage tank level control setpoint will be reduced to 1,500-1,000 gallons during the summer period, to minimize HRT in the system. Additionally, the automatic flush blow-offs shall be re-installed to assure periodic flushing of the distribution mains during extended periods of minimal water demand;
5. The water storage tank operating protocol will be modified to perform flushing of water following vacations and shut-downs that occur during the school year, to prevent water from remaining in the system during periods when the school is closed from 4 to 10 days;
6. Monthly monitoring of disinfection by-products shall continue through the end of June 2016 to provide a more comprehensive monitoring data base for quality control and validation of the modifications to the system operation and control;

Please contact this office with any questions or comments.

BLACKSTONE-MILLVILLE REGIONAL SCHOOL DISTRICT 2016-2017 CALENDAR

AUGUST 2016

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

1

SEPTEMBER 2016

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
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20

OCTOBER 2016

S	M	T	W	T	F	S
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9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

19

NOVEMBER 2016

S	M	T	W	T	F	S
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6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

18

DECEMBER 2016

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

17

JANUARY 2017

S	M	T	W	T	F	S
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8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

20

September 2016

August 30 - Orientation Day for Staff
August 31 - School Opens/All Students Report
September 2 - Labor Day Recess - No School
September 5 - Labor Day - No School

October 2016

October 7 - Professional Development Day - No School
October 10 - Columbus Day - No School

November 2016

November 8 - Professional Development Day - No School
November 11 - Veterans Day Observed - No School
November 23 - Half Day
November 24 - 25 - Thanksgiving Recess - No School

December 2016

December 23 - Half Day
December 26 - 30 - Holiday Recess - No School

January 2017

January 2 - Holiday Observed - No School
January 3 - School Opens - All Students/Staff Return
January 16 - Martin Luther King Jr. Day - No School

February 2017

February 20-24 - Winter Recess - No School

April 2017

April 13 - Professional Development Day - No School
April 14 - Good Friday - No School
April 17 - 21 Spring Recess - No School

May 2017

May 29 - Memorial Day - No School

June 2017

June 2 - Graduation Class of 2017
June 16 - Last Day - Half Day
June 19 - 23 - Make-up Emergency Days if Needed

JFK Elementary - 508-876-0118
AFM Elementary - 508-876-0119
Millville Elementary - 508-876-0177
FWH Middle School - 508-876-0190
BMR High School - 508-876-0117
Superintendent's Office - 508-876-0137

FEBRUARY 2017

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
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26	27	28				

15

MARCH 2017

S	M	T	W	T	F	S
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12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

23

APRIL 2017

S	M	T	W	T	F	S
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23	24	25	26	27	28	29
30						

13

MAY 2017

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7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

22

JUNE 2017

S	M	T	W	T	F	S
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18	19	20	21	22	23	24
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12

JULY 2017

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BLACKSTONE-MILLVILLE
REGIONAL SCHOOL DISTRICT
ALLEN W. HIMMELBERGER
SUPERINTENDENT OF SCHOOLS

MEMO

TO: Blackstone-Millville Regional School District Committee
RE: School Choice 2016-2017 School Year
DATE: May 12, 2016

Every school committee must vote prior to June 1, 2016 about whether or not their district will accept school choice pupils in the upcoming 2016-2017 school year. The vote may also specify which grades and how many openings are available, although that information is not required and is not binding. A letter summarizing the vote of the school committee must be sent to the Department of Elementary and Secondary Education.

Recommendation:

The Blackstone-Millville Regional School District will continue to accept school choice students in the 2016-2017 school year at all grade levels, subject to class size limitations.

Motion:

To approve the participation of Blackstone-Millville Regional School District in the school choice program for the 2016-2017 school year at all grade levels subject to class size limitations.

BLACKSTONE-MILLVILLE REGIONAL DISTRICT SCHOOL COMMITTEE 2016-2017 Calendar

July 2016						
Su	M	Tu	W	Th	F	S
					1	2
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10	11	12	13	14	15	16
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31						

August 2016						
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September 2016						
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October 2016						
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November 2016						
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December 2016						
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January 2017						
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February 2017						
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March 2017						
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April 2017						
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23	24	25	26	27	28	29
30						

May 2017						
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28	29	30	31			

June 2017						
Su	M	Tu	W	Th	F	S
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25	26	27	28	29	30	

Meeting locations to be determined
Meeting begins at 7:00 p.m., unless otherwise indicated

School Committee Meeting
February 23, 2017 – Budget Hearing
March 9, 2017 – Budget Adoption
April 13, 2017 – Annual Reorganization of BMRDSC

Blackstone-Millville Regional School District - Health Insurance Renewal 7/1/16: HMO Options												
					New plans eff. 7/1/2016							
Current Plan Benefits		MIIA Network Blue NE HMO As is Ren'i			MIIA Network Blue NE HMO Benchmark 2 with changes			MIIA Network Blue NE HMO Benchmark 2 with changes + Custom Network				
Physician Office Visit / Preventive	Covered in Full, no deductible			Covered in Full, no deductible			Covered in Full, no deductible					
Physician Office Visit / Medical Care	\$20 - PCP / \$35 - Specialist			\$40 - PCP / \$60 - Specialist (\$40 Therapy & Chiro)			\$20 - PCP / \$60 - Specialist (\$20 Therapy & Chiro)					
Deductible	\$250 / \$750 Plan Year Deductible			\$300 / \$900 Plan Year Deductible			\$300 / \$900 Plan Year Deductible					
Out-of-Pocket Maximum	Separate \$2,500 / \$5,000 Separate \$1,000 / \$2,000 Rx OOP			Separate \$2,500 / \$5,000 Separate \$1,000 / \$2,000 Rx OOP			Separate \$2,500 / \$5,000 Separate \$1,000 / \$2,000 Rx OOP					
Coinsurance	NA			NA			NA					
Emergency Room	\$100 Copay after Deductible			\$200 Copay after Deductible			\$100 Copay after Deductible					
IN-PT Hospital Admission	\$300 or \$700 Copay after Deductible (HCSH)			\$275 or \$1,500 Copay after Deductible (HCSH)			\$275 Copay after Deductible (Custom Network)					
OUT-PT Surgical Day Care Ambulatory Surgical Facility	\$250 or \$750 Co-pay after ded			\$250 co-pay after ded			\$250 co-pay after ded					
Lab & X-rays	Covered in Full after Deductible			Subj to ded			Subj to ded					
CAT Scans, MRI, PET Scans	\$100 Copay after Deductible			\$200 Copay after Deductible			\$100 Copay after Deductible					
RX - 30 Day Retail or 90 Day Mail Order Delivery	\$10 / \$25 / \$50 \$20 / \$50 / \$110			\$10 / \$25 / \$40 / \$65 \$20 / \$50 / \$80 / \$195			\$10 / \$30 / \$65 \$75 / \$165					
Current Enrollment	Single	67	2-Party	33	Family	82	Single	67	2-Party	33	Family	82
MIIA Current Rates	\$588.98	\$1,236.86	\$1,680.95	\$588.98	\$1,236.86	\$1,680.95	\$588.98	\$1,236.86	\$1,680.95	\$1,236.86	\$1,680.95	
Renewal Rates	\$664.37	\$1,395.18	\$1,896.11	\$623.14	\$1,308.60	\$1,778.45	\$599.58	\$1,259.12	\$1,711.21	\$1,259.12	\$1,711.21	
Renewal Percentage Increase	12.80%	12.80%	12.80%	5.80%	5.80%	5.80%	1.80%	1.80%	1.80%	1.80%	1.80%	
				HCSH: Higher Cost Share Hospitals				Custom Network Option				
				HCSH: Higher Cost Share Hospitals Specialty Pharmacy Program Replaces current HMO Plan				Specialty Pharmacy Program				

Blackstone-Millville Regional School District - Health Insurance Renewal 7/1/16: PPO Options

	New Plan eff 7/1/2016						
<u>Current Plan Benefits</u>	MIIA Blue Care Elect PPO W/Spec Pharm. (In-Network Benefits)						
Physician Office Visit / Preventive	Covered in Full, no deductible						
Physician Office Visit / Medical Care	\$40 PCP/\$60 Spec. per visit after Deductible						
Deductible	\$1,000 / \$2,500 Plan Year Deductible						
Out-of-Pocket Maximum	\$2,500 / \$5,000 Separate \$2,500 / \$5,000						
Coinsurance	20% Coinsurance after Deductible for Out-of-Network Services						
Emergency Room	\$150 Copay after Deductible						
IN-PT Hospital Admission	Covered in Full after Deductible						
OUT-PT Surgical Day Care Ambulatory Surgical Facility	Covered in Full after Deductible						
Lab & X-rays	Covered in Full after Deductible						
CAT Scans, MRI, PET Scans	\$150 Copay after Deductible						
RX - 30 Day Retail or 90 Day Mail Order Delivery	\$10 / \$25 / \$40/\$65 \$20 / \$50 / \$80 / \$195						
Current Enrollment	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Single</td> <td>25</td> <td>2-Party</td> <td>9</td> <td>Fam</td> <td>5</td> </tr> </table>	Single	25	2-Party	9	Fam	5
Single	25	2-Party	9	Fam	5		
MIIA Current Rates	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>\$695.92</td> <td>\$1,461.44</td> <td>\$2,214.15</td> </tr> </table>	\$695.92	\$1,461.44	\$2,214.15			
\$695.92	\$1,461.44	\$2,214.15					
Renewal Rates	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>\$785.00</td> <td>\$1,648.50</td> <td>\$2,497.56</td> </tr> </table>	\$785.00	\$1,648.50	\$2,497.56			
\$785.00	\$1,648.50	\$2,497.56					
Renewal Percentage Increase	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>12.80%</td> <td>12.80%</td> <td>12.80%</td> </tr> </table>	12.80%	12.80%	12.80%			
12.80%	12.80%	12.80%					

20% Coinsurance Applies to all OON Services
Special Pharmacy Program
20% Coinsurance Applies to all OON Services

BLACKSTONE-MILLVILLE
REGIONAL SCHOOL DISTRICT
ALLEN W. HIMMELBERGER
SUPERINTENDENT OF SCHOOLS

MEMO

TO: Blackstone-Millville Regional School District Committee
RE: Middle School Principal of the Year
DATE: May 12, 2016

It is with great pleasure that I can announce that Justin Cameron has been honored by the Massachusetts Secondary School Administrators Association (MSSAA) as the Middle School Principal of the Year. This is a tremendous accomplishment and a true testament to the outstanding work that Mr. Cameron does each day on behalf of students, staff, and families in our educational community.

Congratulations Mr. Cameron!

JOB# 6985	EST# 5459	ITEM# 1	PROOF DATE: 3/8/16	REVISION#
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APPROVAL
 SIGNATURE & DATE REQUIRED FOR PRODUCTION
 SIGNATURE _____ DATE _____

4' x 6' 2-sided entrance sign w/
 carved header & changeable
 letter box w/ set of 400 4" pronto
 letters w/ PT timber island set into
 pavement

Frederick W. Hartnett
 Middle School
 Blackstone, MA

EXPOSE'
 SIGNS & GRAPHICS, INC.
 13 Airport Road - Hopedale, MA
 phone 508.381.0941 fax 508.381.3784
 www.exposesigns.net

JOB# 6985

EST# 5459

ITEM# 1

PROOF DATE: 3/8/16

REVISION#

72 in

**FREDERICK W. HARTNETT
MIDDLE SCHOOL**

V- Carved letters

**ENJOY THE LONG
COLUMBUS DAY WEEKEND
GIFT WRAP FUNDRAISER
BEGINS TUESDAY!**

4" Pronto letters

Locking changeable letter section

48 in

120 in

12.01 in

6" x 6"

PT timber island

APPROVAL
SIGNATURE & DATE REQUIRED FOR PRODUCTION

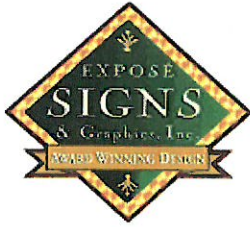
SIGNATURE _____

DATE _____

4' x 6' 2-sided entrance sign w/
carved header & changeable
letter box w/ set of 400 4" pronto
letters w/ PT timber island set into
pavement

**Frederick W. Hartnett
Middle School
Blackstone, MA**

EXPOSE
SIGNS & GRAPHICS, INC.
13 Airport Road • Hopedale, MA
phone 508.381.0941 fax 508.381.3784
www.exposesigns.net



Expose Signs

13 Airport Rd.
 Hopedale, MA 01747
 Ph: 508-381-0941
 Fax: 508-381-3784
 sales@exposesigns.net
 www.exposesigns.net

Estimate #: 5459

Created Date:	10/14/2015 4:14:43PM	Prepared For:	Blackstone Middle School
Salesperson:	House Account	Contact:	Cheryl Magria
Email:	margie@exposesigns.net	Office Phone:	(508) 969-7297
Not Specified:	(508) 381-0941	Office Fax:	(508) -
Not Specified:	(508) 381-3784	Email:	cheryl.magri@gmail.com
Entered by:	Margie McCurley	Address:	35 Federal Street Blackstone, MA 01504

Description: ENTRANCE SIGN

		Quantity	Subtotal
1	Product: Dimensional Signs (Flat Cut) Description: 1 - 48"Hx72"W 2-SIDED ENTRANCE SIGN: V-CARVED HEADER PANEL; 2- 6"X6"X 8' ALUMINUM POSTS & BRACKETS; PURPLE WITH WHITE COPY, BLACK OUTLINES/ACCENTS, BOTTOM SECTION IS LOCKING CHANGEABLE LETTER PANEL W/HINGING CABINET; CLEAR POLYCARBONATE FACE AND SET OF 400 - 4" PRONTO LETTERS Frederick W. Hartnett Middle School CHANGEABLE COPY SECTION	1	\$3,180.00

		Quantity	Subtotal
2	Product: Installation of Non-Electric Signs Description: INSTALLATION OF NEW SIGN Site Address: _____ Site Contact: _____ Customer Signature: _____ Completion Date: _____	1	\$300.00

		Quantity	Subtotal
3	Product: Installation of Non-Electric Signs Description: ADDITIONAL CHARGE FOR INSTALLATION IN CEMENT AREA Site Address: _____ Site Contact: _____ Customer Signature: _____ Completion Date: _____	1	\$300.00

		Quantity	Subtotal
4	Product: Permit Acquisition Fee Description: Permit Acquisition Fee • Quantity: 1 • Side(s): Single Sided • Product Code: Permit Acquisition Fee • Height: 0 in Width: 0 in • Background Color: Not Assigned Foreground Color: Not Assigned Font: Not Assigned	1	\$150.00



Expose Signs

13 Airport Rd.
Hopedale, MA 01747
Ph: 508-381-0941
Fax: 508-381-3784
sales@exposesigns.net
www.exposesigns.net

Estimate #: 5459

	Quantity	Subtotal
5 Product: Permit Cost	1	\$0.00
Description: Actual Permit Cost tbd		
<ul style="list-style-type: none"> • Quantity: 1 • Side(s): Single Sided • Product Code: Permit Cost • Height: 0 in Width: 0 in • Background Color: Not Assigned Foreground Color: Not Assigned Font: Not Assigned 		

Subtotal: \$3,930.00
Total: \$3,930.00
Tax Exempt No. tbd

Payment Terms: 50% Dep/Bal. upon complet

Client Reply Request

- Estimate Accepted "As Is". Please proceed with Order.
- Changes required, please contact me.

Other: _____
SIGN: _____ **Date:** / /

Print Date: 2/2/2016 10:15:53AM